enviro CADDIE™

PAINT DISPENSING SYSTEM

USER MANUAL

Rev. 042004

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PACKAGE CONTENTS

EnviroCaddie Paint Dispenser Box

- EnviroCaddie™ Paint Delivery System
- 6’ Charging Hose Assembly
- Mixer Drive Assembly
- Trigger Handle Assembly
- User Manual
- Instructional CD Rom

Startup Kit

- Argon Regulator Assembly
- 6’ Charging Hose
- Paint Funnel (1 per color ordered)
- Paint Pouring Spout (1 per color ordered)
- Spare Parts Kit

NOMENCLATURE

ITEM	PART NO.	DESCRIPTION
1	167-200	Receptor Body Assembly
2	167-201	Retaining Ring
3	See Chart	Actuator
4	167-202	Vertical Action Valve
5	133-105	Vertical Valve Lower Seal
6	167-208	Handle Retainer
7	167-209	Thumbscrew
8	n/a	Needle Valve

Note: No other serviceable parts are on the receptor assembly. Factory service only recommended

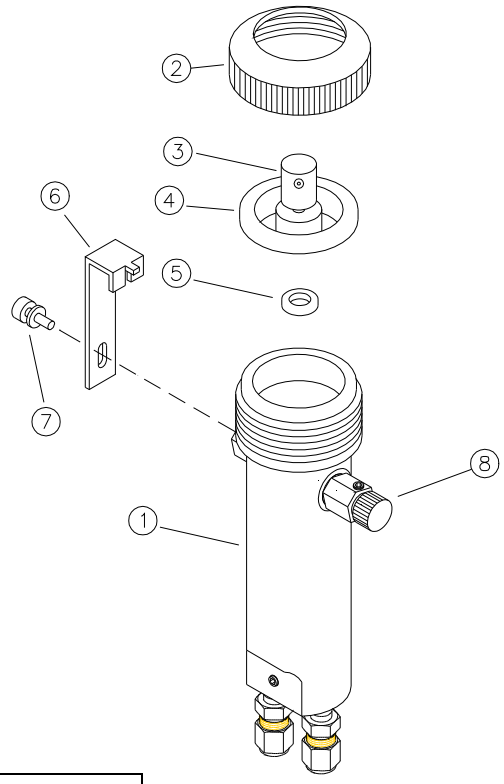

Figure 1

NOMENCLATURE (cont.)

Paint Tank

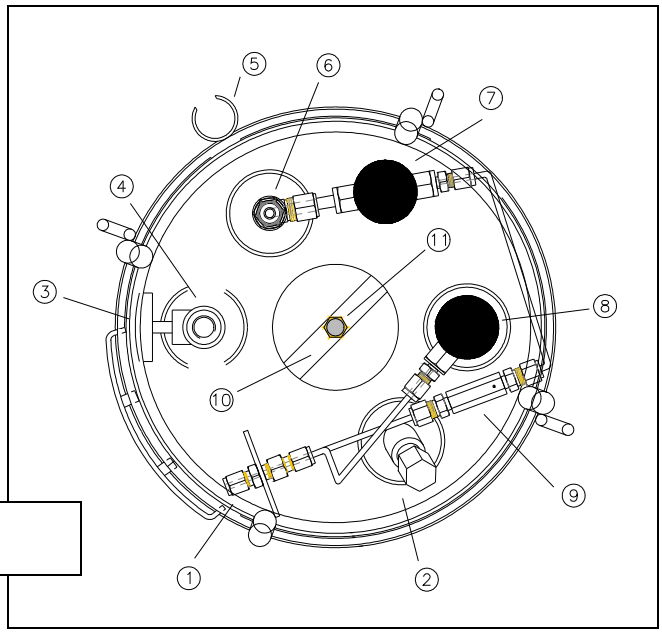

Figure 2

ITEM	PART NO.	DESCRIPTION
1	267-110	Bulkhead Connectors
2	267-125	Mixer Drive Assembly
3	267-102	Pressure Gauge
4	267-103	Charging Valve
5	n/a	Receptor Holder
6	267-104	Pressure Relief Valve
7	267-107	Propellant (Argon) Valve
8	267-106	Product (Paint) Valve
9	267-105	Argon Flow Controller
10	267-101	Fill Cap
11	233-115	Depressurization Valve

PRINCIPLE OF OPERATION

Tank Valves

Figure 2 shows the two shut-off valves mounted on the tank top.

The propellant valve ***(Item #7)*** is used to supply Argon to the receptor. When this valve is opened, the pressurized Argon passes through the flow controller ***(Item #9)*** and to the first ⅛" OD Teflon® supply line feeding the receptor. A metered amount of Argon is used for both, atomizing the paint, and purging (cleaning) the receptor. This process will be detailed in the next section.

The product valve ***(Item #8)*** is used to supply paint to the receptor. Opening this valve delivers paint to the second ⅛" OD Teflon® supply line that feeds the receptor.

During normal painting operation, both valves ***(Items #7 & #8)*** should be in the fully open position.

The Receptor

The receptor ***(Figure #1)*** was designed to be compact, versatile, and trouble-free. A single valve is utilized to simplify operation. In the closed position, only Argon is dispensed when the actuator ***(Item #3)*** is pressed. This is the "Purge" position of the unit. When the needle valve ***(Item #8)*** is opened, product is allowed to pass into the vertical action valve ***(Item #4)*** and through the actuator's nozzle, producing the spray pattern. The EnviroCaddie System is designed specifically for use with our proprietary paint formula.

ENVIROCADDIE™ BRAND PAINT

The Sheboygan Paint Co, of Sheboygan, WI, provides our touch-up paint that is formulated, specifically for the EnviroCaddie. SPC is a mid-size, national paint company that specializes in "niche-market" coatings for both OEM and industrial/maintenance applications.

Our EnviroCaddie touch-up paint is a modified, super fast air-dry acrylic that provides superior adhesion, exterior durability, rust protection, and high gloss retention. When sprayed by the EnviroCaddie, paint performance and productivity is greatly increased while cost, compared to the aerosol can, is dramatically reduced.

Paint Preparation: Like all paint applications, it is important to clean the area to be painted so that it is free from all dirt, oil, grease, and loose (rust) material. It should also be dry to achieve good adhesion.

Filling the EnviroCaddie: When filling the EnviroCaddie for the first time, or when empty, it is important to open the gallon paint can and stir the paint thoroughly with the provided paint stick so that the pigment is fully suspended and not left on the bottom of the can. This is very important as the pigment provides good hiding and in most cases one-coat coverage. Do not open the Caddie until this is done.

VERY IMPORTANT: EnviroCaddie paint is a very fast, air-dry enamel coating and it is, therefore, important that a lid be kept on the gallon pail until it is ready to pour. A re-usable plastic lid with a pour spout is provided with each Caddie for this purpose.

FILLING THE CADDIE

If the Caddie is being used for the first time, there is **no pressure** inside, the fill cap ***(Fig. 2, Item #10)*** can be removed by turning it counterclockwise until free.

IMPORTANT!!

If the Caddie has been in use and is under pressure, open the depressurization valve (Fig. 2, Item #11) before attempting to remove the fill cap!!

DO NOT TRY TO REMOVE THE COVER IF THE UNIT IS UNDER PRESSURE

- Unscrew the fill cap to open the top of the tank. A removable filter made of 100-mesh Stainless Steel rests on a rim inside the opening to prevent particles from entering the Caddie that could potentially clog the orifices.
- Remove the paint container cover and stir with the provided stick until ***thoroughly*** mixed.
- Snap the pouring spout on the paint can and pour contents into tank.
- Replace the fill cap by turning it clockwise until the seal makes contact with the tank spout and tighten another ⅛ turn.
- The Caddie is now ready to be pressurized.

PRESSURIZING THE CADDIE

The Caddie is easily pressurized with the enclosed charging hose. Charging pressure is to be set at the regulator to 125 psig. Charging the Caddie to higher pressures will result in unsatisfactory spray pattern and finish.

IMPORTANT!!

DO NOT use compressed air to charge the Caddie!!! This will result in a vapor mixture inside the tank that will be highly flammable **and** Oxygen rich. NFPA guidelines prohibit the use of compressed air in vessels with this volume capacity. **USE ONLY Argon** for pressurization.

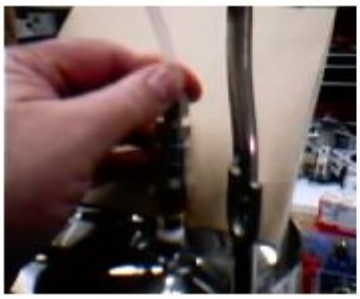

Figure 3a

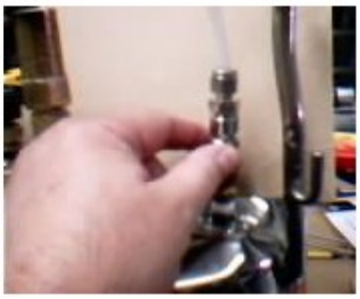

Figure 3b

- Close both valves on the top of tank ***(Figure 2, Items #7 and #8)***
- Remove cover from charging valve as described above in the previous section
- Attach charging hose by pressing down to engage lock **(Fig. 3a)**
- Wait until pressure gauge indicator reaches the “Full” hash mark
- Release charging hose lock by pulling down on the snap **(Fig. 3b)**
- Remove charging hose and replace the dust cover
- The Caddie is now full and charged.

MIXING PROCEDURE

When a fresh batch of paint is first poured into the Caddie, it is presumed to be thoroughly mixed and ready for use. If the Caddie contains paint and has been unused for at least 4 hours*, re-mixing is necessary. Tools supplied with the Caddie to accomplish this procedure are a 5/8” Swivel 3/8” Drive Drill Adaptor.

- Attach the 5/8” Swivel Adaptor to the drill.
- Place the 5/8” Socket on the Mixer Drive ***(Fig. 2, Item #2)***
- Turn mixer drive at approximately 300-500 RPM (clockwise) for about 3 minutes
- Paint is now mixed and ready for use.

APPLYING THE PAINT

The EnviroCaddie was designed to be as easy to use as the aerosol spray can, but with many added features. Spraying is as simple as pointing the receptor and pressing the actuator. For most paints, a spray distance of 6-8” is suitable, although experience and familiarity with the unit will result in the user developing various techniques for the different formulas.

Advantages of the innovative receptor design include:

- Paint with the receptor in any orientation, even upside down
- Easily replace the vertical action valve ***(Fig.1, Item #4)*** if it ever becomes clogged
- Locking trigger handle eliminates radial movement that can block the spray pattern
- Provides Argon atomization of paint allowing for more even surface coverage
- Easily purged for storage by simply closing the paint valve and spraying Argon through actuator

THE PURGING PROCESS

Purging the receptor is a very important part of normal day-to-day operation. Purging cleans the paint from the upper chambers prior to storage. This is similar to turning an aerosol can upside down and pressing the actuator.

Purging is achieved by closing the paint needle valve and pressing the actuator for 5 seconds. Figure 4 below shows the result of a proper purge.

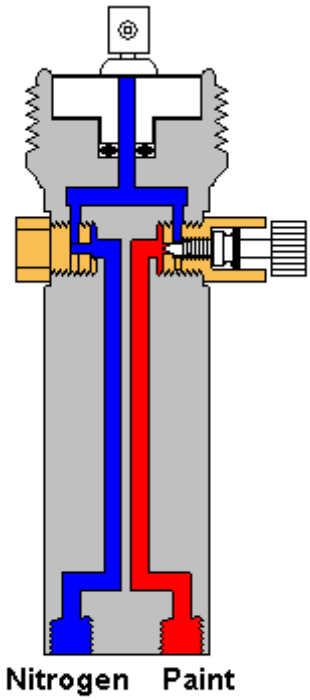

Figure 4

Replacing the Vertical Action Valve

Refer to figure #1(Receptor) except when otherwise noted.

IMPORTANT ! !

Follow these procedures carefully to avoid personal injury or damage to the equipment !!

Removing The Vertical Action Valve

- Close needle valve at the receptor (Item #8)
- Depress the actuator (Item #3)to purge the unit
- Close valves at tank (Items 7 & 8 Figure #2)
- Depress the actuator again to release remaining pressure
- Remove thumbscrew (Item #7) and handle retainer (Item #6)
- Remove handle by turning clockwise ½ turn and pulling down on handle
- Unscrew retaining ring (Item #2)
- Carefully pry up vertical action valve (Item #4) while being careful not to lose the lower seal (Item #5)
- Inspect the lower seal for damage, if good it can be re-used

Replacing The Vertical Action Valve

- Place lower seal (Item #5) in receptor bore
- Place the new vertical action valve (Item #4) on receptor
- Replace and tighten retaining ring (Item #2)
- Install new actuator (Item #3)
- Replace the handle by placing the front into the receptor, pressing the rear back and turning ½ turn clockwise.
- Replace the handle retainer (Item #6) and the thumbscrew (Item #7)
- Open valves at tank (Items 7 & 8 Figure #2)
- Depress actuator (Item #3) to check purge function
- Caddie is now ready to dispense paint

TROUBLESHOOTING

Problem	Possible Cause	Solution
Caddie Will Not Spray	Tank Valves Closed	Open tank valves
	Needle Valve Closed	Open needle valves
	Low Argon Pressure	Pressurize tank
	Actuator is clogged	Replace actuator
Spray Pattern Is Poor	Low Argon Pressure	Pressurize tank
	Actuator is clogged	Replace the actuator
Paint Heavy Or Runs	Spray is too close to work	Spray 6-8” from work
	Temperature below 55°F	take work to warmer area if possible
	Caddie temperature below 55°F	Store Caddie in warm area
	Paint is not mixed thoroughly	Mix paint as per procedure on page 8
Paint Spray Sputters	Low Argon Pressure	Pressurize tank
	Argon valve not fully open	Open Argon valve on tank
	Faulty vertical action valve	Replace Valve
	Partially clogged actuator	Replace actuator

[1]To check for clogged actuator:

- Close all valves
- Open the tank Argon valve ***(Figure 2, Item #7)***
- Depress the actuator ***(Figure 1, Item #3)***
- Argon should be heard exiting lightly out of the actuator

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http://www.envirocaddie.com

CADDIE II

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